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6 January 1981

Worldwide Report

NUCLEAR DEVELOPMENT AND PROLIFERATION

No. 76

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U.S. NUCLEAR FUEL DELIVERIES TO INDIA

BK160223 Calcutta THE STATESMAN in English 3 Dec 80 p 8

[Editorial: "Truth About Tarapore"]

[Text] The prime minister made no revelation in her recent report to Parliament on the state of American fuel supplies for Tarapore [or] that a 19.8 ton shipment of enriched uranium had arrived in October had been reported at the time.

It was one of the two permitted by President Carter's executive order--and subsequently approved by the U.S. Senate, though not before adverse votes in the House of Representatives and in the foreign relations committees of both houses of congress. The final Senate decision was far from reassuring; one purchase order had been cleared after two years and the other after nearly a year, and it was clear that while the first shipment would not be further delayed, the second was unlikely to be made before further efforts to persuade India to accept fullscope safeguards. This is exactly what has happened. As Mrs Gandhi has disclosed, the second shipment has been "withheld" and made "subject to conditions extraneous to the cooperation agreement of 1963." Since these conditions are known to be unacceptable to India, and since the U.S. Congress is unlikely to be more accommodating now than it was in September, there is little prospect of early arrival of the second consignment. The fate of a consignment for delivery next year, for which an application was made towards the end of September, is still more uncertain. When, in September, the Senate approved President Carter's order permitting two shipments, the best that could be hoped for was that the Carter administration would see to it that both were made reasonably soon. But, apparently, subsequent talks in Washington between officials of the two governments were unproductive.

The Carter administration can hardly be expected to take any new initiative at this stage. Mr Reagan's, which will in any case take time to formulate its policy on specific issues, is unlikely to be more sympathetic, even if the new president does not share Mr Carter's obsessive concern over the alleged risk of weapons proliferation in the growth of civil nuclear programmes. Most important of all, the mood in Congress, which was disturbingly unhelpful during the discussions in September, is now almost certain to be more hostile. Barring an unforeseeable and major change, which could be brought about only by developments or considerations which must seem extremely unlikely now, there is therefore little scope for further nuclear cooperation between India and the United States. New Delhi may still wish to avoid doing anything that might prejudice future negotiations, as well as larger Indo-U.S. relations. Hence, apparently, the continuing reluctance to declare that the USA has already violated the 1963 agreement and that India is therefore free from such obligations as that not to reprocess spent fuel from the Tarapore power plant. While this circumspection is in order on both technical and political considerations, New Delhi will have to proceed on the assumption that the chances of further U.S. fuel supplies are very small. One alternative talked about for a long time is use of an indigenously fabricated mixed uranium-plutonium fuel to operate the Tarapore reactors. Since the prime minister has disclosed that the present stocks of enriched uranium will last till 1983-84, India still has more than three years to develop the new fuel and make any necessary reactor modifications for its use. If there is still any uncertainty, the possibility had better not be mentioned at all.

WORLDWIDE AFFAIRS

BRIEFS

ARGENTINA, FRG AGREEMENT--Buenos Aires, 5 Dec (TELAM)--A bilateral agreement regarding space and nuclear technology as well as research on medical, oceanographic, fishing, mining, geological and technical processes in industry has been signed between Argentina and the FRG. The meetings that were held in the past few days ended today with the signing of the agreement. The respective governments were represented by Raul Cura, Argentine under secretary of international economic affairs, and Reinhard Loosch, FRG minister of research and technology. It also was agreed to carry out studies in the immediate possibilities for the use of unconventional energy such as solar and biomass energy. [Text] [PY091741 Buenos Aires TELAM in Spanish 1430 GMT 6 Dec 80]

CSO: 5100

URANIUM MINING ADVOCATED FOR SOUTH

Perth THE WEST AUSTRALIAN in English 3 Nov 80 p 41

[Text] Adelaide: The South Australian Mines and Energy Minister, Mr Goldsworthy, said yesterday that there was no reason why the mining and developing of the State's uranium resources should be delayed.

Mr Goldsworthy, who has been on an overseas uranium fact-finding mission, said he was satisfied that Sweden had found an answer to the problems of disposing of radioactive wastes.

He recently met representatives of the Swedish Nuclear Fuel Supply Co. and the Nuclear Safety Board.

He said he was shown plans for intermediate storage of spent fuel and reactor components and a repository for final disposal of waste in deep granitic rock.

Swedish legislation required that the owner of a nuclear reactor must demonstrate the feasibility of final storage of waste.

The Swedish Research and Development Works had now received government approval under this legislation and the country's nuclear power programme would be brought to full capacity before the end of the decade.

Mr Goldsworthy said that after a similar fact-finding trip early last year the former Labor Premier, Mr Dunstan, told Parliament that the Swedish waste-disposal system was on the point of being proved.

Mr Dunstan raised doubts because he had been told that the Swedish system could be applied only in areas that had similar formations of deep granitic rock. These occurred in only a few countries throughout the world.

Mr Goldsworthy said that since Mr Dunstan's overseas visit these developments had been proved to the satisfaction of the Swedish Government.

Referendum

A national referendum had approved the expansion of the country's nuclear power programme.

Mr Goldsworthy said: "I have also been assured that this method for final storage could be applied in other parts of the world.

"The granitic rock being used in Sweden's research and development is estimated to be 1600 million years old. Rocks of a similar age and older are known to exist in other parts of the world.

"In all these circumstances there is no reason to suggest that the mining and development of South Australia's uranium resources should be delayed because of problems of waste disposal."

CSO: 5100

TOWNSVILLE GROUP OPPOSES FRENCH URANIUM MINING

Court Appeal

Melbourne THE AGE in English 5 Nov 80 p 17

[Article by Russell Skelton: "Townsville N-Mine Challenged"]

[Text] Brisbane--A Townsville conservation group is mounting the first serious legal challenge to the granting of a uranium mining lease.

The group will ask the Queensland Mining Court to refuse the French-controlled company Minatone extra uranium leases on the Ben Lomond prospect near Townsville.

The Townsville Regional Conservation Council, with the backing of the Australian Conservation Foundation, will object to the proposed lease at a special hearing of the court at Charters Towers on 8 December.

But the court hearing may not resolve the issue. The State Mines Minister has the power to veto any decision of the court.

The council plans to call expert witnesses including Professor Sir Charles Kerr, a commissioner on the Ranger inquiry and Mr Hugh Sadler of the Australian National University.

A spokesman for the conservation council, Mr Adrian Jeffreys, claimed yesterday that conservationists believed the environment impact statement ordered when the first leases were granted at Ben Lomond four years ago was inadequate.

Mr Jeffreys said the new leases fell within the Burdekin Dam catchment area, one of Australia's largest water resources projects, which is also used for recreation.

The council will claim that it is not in the public interest for uranium leases to be granted until it can be demonstrated that the processing and distribution of uranium is safe.

Mr Jeffreys said it would argue also that wastes from the proposed mine could affect the environment and the health and well-being of mine workers.

Minatome applied for leases on an extra 2000 hectares last April. The application was advertised by the Government in August.

The present lease covers 128 hectares and the company has proved recoverable reserves of 2000 tonnes of uranium oxide worth about \$130 million.

Minatome Prospects

Sydney THE SYDNEY MORNING HERALD in English 5 Nov 80 p 31

[Article by J. W. Pierce]

[Excerpts] Townsville, the humid north Queensland port through which more than \$1 billion worth of minerals from Mount Isa and Greenvale were funnelled in the past financial year, is looking to a bigger involvement in minerals over the next few years.

If things go well, the mid-1980s could see the permanent resumption of phosphate rock from the vast Duchess deposits 760 kilometres to the west, the development of small but significant gold, silver, copper, silver-lead-zinc and uranium-molybdenum projects west of the hazy escarpment and the possible start of a major shale oil development at Julia Creek.

At present, roughly half of Townsville's annual exports of around 1.2 million tonnes is represented by the Mount Isa mine's output of refined copper, crude lead and zinc concentrate.

But on top of these basic, high tonnage operations, there are a number of smaller and significant mineral developments shaping up in Townsville's hinterland.

--Minatome Australia Pty Ltd, jointly owned by Pechine Ugine Kuhlmann Compagnie Francaise des Petroles (Total), has begun advertising for key senior staff to complete a feasibility study for a uranium-molybdenum project at Ben Lomond, 60 kilometres west of Townsville.

Minatome was granted the Ben Lomond lease by the Queensland Government last May and has since undertaken an active drilling program.

Minatome is looking at a project which would treat about 200,000 tonnes of ore a year for the production of 400 tonnes of uranium oxide and between 200 and 300 tonnes of molybdenum. The project would have a life of at least 10 years.

It expects that two years will be needed for the completion of the feasibility study and the granting of all the necessary permits and licences by the Federal Government.

If the Foreign Investment Review Board sticks by the strict rules, Minatome will have to relinquish a 75 per cent interest to Australians before it can obtain an export licence from the Federal Government.

If the Foreign Investment Review Board sticks by the strict rules, Minatome will have to relinquish a 75 per cent interest to Australians before it can obtain an export licence from the Federal Government.

Minatome's managing director, Mr Bernard Cahen, said yesterday that the company would comply with whatever the Federal Government required. "We have some possible Australian partners but are not yet in a position to disclose identities," he said.

C80: 5100

EDITORIAL LAUDS UNION OK TO TRANSPORT URANIUM

Canberra THE AUSTRALIAN in English 11 Nov 80 p 8

[Editorial: "A Sensible Decision on Railing Uranium"]

[Text] A glimmer of sanity amid today's industrial turmoil is the decision by rank and file members of the Railway Station Officers Union in Queensland to defy their State Council's recommendation to block the transport of uranium yellowcake from the mines to the ports for export. There is just one union among many still undecided on the uranium issue, but it is an important one, and the reasoning behind its difficult decision--which flies in the face of the ACTU--shows immense common sense.

The RSOU has decided in essence that it should take no action which would result in a loss of jobs of fellow unionists. Though they had the power to stop the transport of uranium dead, the railmen reasoned that the ultimate decision on whether to block uranium extraction belonged with the unionists at the mines -- if the miners were opposed to uranium mining, then they should be the ones to call a halt.

Such an attitude is at the heart of genuine unionism which has been all too easily forgotten in the political stance taken by the majority of

unionists over the past few years. Too often we have seen one branch of unionism hurtfully throwing another into turmoil in the pursuit of selfish, obscure or irrelevant aims. The oil tanker drivers and aircraft refuellers' strike which last night was threatening the jobs of thousands in the airline and related industries is an example of the "couldn't care less" attitudes often adopted by one body of unionists against another.

For the RSOU rank and file to take their responsible stand in defiance of a recommendation by their ruling body is even more worthy of praise. Some 58 per cent voted in favor of transporting yellowcake "as a general principle" and 64 per cent voted in favor of transporting all uranium ore, including that from Mary Kathleen.

The fact is that uranium mining is happening NOW. Nothing the railmen can do will change that. The Mary Kathleen mine in Queensland is at full production to supply overseas orders and mining is already a reality in the huge uranium developments in the Northern Territory. Thousands of workers--most of whom would describe themselves as good unionists--want to get on with the job without having to worry about their "brothers" in other

parts of the nation undermining their and their families' livelihoods.

The RSOU vote, passed by a comfortable majority to allow uranium yellowcake to be transported by rail from Queensland and the Northern Territory to ports for transport overseas, calls into question the reason and the reasonableness of the ACTU's continuing determination to fight the mining and export of uranium. Simply put, the unions and unionists whose role it is to mine uranium want to mine uranium. That means a major sector of ACTU membership wants no part of the "stop uranium" campaign. With the move by the RSOU, and its recognition of the rights of fellow unionists to work

at their jobs, a significant part of the membership involved in transporting uranium has also stated its view.

The ALP recently softened its line when the Leader of the Opposition, Mr Hayden, stated that he believed the questions of safeguards and agreements were "technical problems" and that "given time, and I would hope, not a great deal of time, they would be overcome".

This sensible approach, and that of the Queensland railmen yesterday, gives rise to hope that Australia will be able to make a reasonable contribution towards solving the energy crisis by developing its energy resources and making them available to those in need - under the appropriate safeguards.

PLANS OUTLINED FOR URANIUM PROCESSING PLANT

Perth THE WEST AUSTRALIAN in English 12 Nov 80 p 76

[Text] The partners in the Honeymoon uranium project near the South Australian-NSW border are hoping to gain State and Federal Government approval early next year to build a \$5.5 million pilot processing plant on site.

The project would be the first in Australia to use solution mining, or a leaching method, to extract and process the uranium deposits for the export market.

Executives of the Brisbane-based company, Mines Administration Pty Ltd outlined plans for the project when they delivered a 74-page draft environmental impact statement to the South Australian government and the Federal Department of Home Affairs and the Environment.

Speaking in Adelaide, the company's general manager, Mr Malcolm Larkins, said the partners were hoping for government approval next January or February.

"The construction of the pilot plant is expected to take six to 12 months and we are hoping to begin production by mid-1982," he said.

"The construction of a full-scale commercial plant will depend on the results we gain from the pilot plant."

Mr Larkins said the pilot plant, which would be managed by his company, would operate initially at about a quarter of the production capacity of a full-scale venture.

It would operate for about 18 months and would then be increased to full capacity with the construction of additional facilities if the initial operation proved a success.

A full-scale commercial plant would operate for seven to 10 years, producing an average of 450 tonnes of uranium oxide a year as dried yellowcake for international markets.

Mr Larkins said it was too early to negotiate potential sales contracts and any product from the pilot plant would be stored on site.

The proposed mine site is 75 km north of Broken Hill in the sparsely-populated Lake Frome Basin on the South Australian side of the border.

The ore body covers 24 hectares and potentially recoverable reserves of uranium oxide are calculated to be 3384 tonnes at an average grade of 0.157 per cent.

CSO: 5100

BRIEFS

JAPAN URANIUM VENTURE--Uranium exploration field programmes have continued on schedule for the Pancontinental Power Reactor and Nuclear Development Corporation of Japan joint venture in the Northern Territory, SA and WA. [Text] [Perth THE WEST AUSTRALIAN in English 5 Nov 80 p 84]

URANIUM MARKET ACTIVITY--Uranium and mining stocks regained ground in quiet mixed trading on Australian share markets yesterday. Uranium issues to rise included Pancontinental, up 50c at \$10.50, Kathleen Investments and Peko, up 20c and EZ, Mary Kathleen and Queensland Mines, all 10c higher. [Excerpts] Brisbane THE COURIER-MAIL in English 12 Nov 80 p 24] Melbourne--EZ Industries Ltd's balance sheet has been boosted by a \$137.4 million net increase in reserves following a revaluation of the Ranger uranium project. The chairman, Sir Edward Cohen, revealed the revaluation to shareholders at the EZ annual meeting yesterday. The revaluation follows the purchase of the Federal Government's share of the Ranger project by the newly-floated Energy Resources of Australia Ltd. and the similar acquisition of EZ's stake. EZ exchanged its stake for shares and cash which "made it appropriate for us to bring to account our interest in the Ranger project at an assessed economic value," the chairman said. [Excerpt] [Brisbane THE COURIER-MAIL in English 12 Nov 80 p 25]

FIJI NUCLEAR OPPOSITION--The Fiji Government yesterday supported a plan by the Victorian secretary of the Amalgamated Metal Workers and Shipwrights Union, Mr John Halfpenny, to set up an independent Pacific trade-union forum. Fiji's Minister for Labor, Ratu David Toganivalu, told the opening of a three-day conference attended by 23 union leaders from nine Pacific countries that his Government would fully support such a body. It will mainly oppose French nuclear tests and Japanese plans to dump nuclear waste in the Pacific. The countries represented would be Australia, Fiji, Guam, Hawaii, Japan, Kiribati, New Caledonia, New Zealand and Vanuatu. Ratu David said the French Government did not publish official statistics about the incidence of leukemia among workers on Muroroa Atoll. But visitors keep coming to us with worrying tales of relatives and friends who have been there and are dying of cancer," he said. There were American and Russian nuclear-powered vessels in the Pacific and if these ships were wrecked there was a danger of contamination. He said Pacific Ocean resources were all too precious. "If our ocean is ruined our life-support system fails. We shall die." [By Vijendra Kumar] [Text] [Canberra THE AUSTRALIAN in English 13 Nov 80 p 3]

URANIUM MINE EXPANSION--The Deputy Prime Minister, Mr Anthony, yesterday hinted strongly that the Government would soon approve more uranium mines. In a speech in Canberra to welcome A French trade mission, Mr Anthony detailed Australia's current uranium development. He said production from Mary Kathleen, Nabarlek, Ranger and Yeelirrie was virtually committed. "Such commitments are a statement of faith and confidence in Australia, and in Australia's reliability and capacity to supply," Mr Anthony said. "The position has now been reached where additional uranium projects should proceed so that the momentum of Australia's advance into the world market can be maintained."

[Text] [Melbourne THE AGE in English 13 Nov 80 p 23]

CSO: 5100

RAO ATTACKS PAKISTAN'S NUCLEAR WEAPONS EFFORTS

BK120921 Delhi Domestic Service in English 0830 GMT 12 Dec 80

[Text] The government is taking all necessary steps to safeguard the country's security in view of reports in the world press that Pakistan is trying to make a nuclear device. This was reiterated by External Affairs Minister Narasimha Rao in the Rajya Sabha today. He was replying to a calling attention notice on the reported illegal transfer of U.S. made electronic equipment to Pakistan through Canada which can be used for developing atomic weapons. The motion was raised by Shiv Chandra Jha, Janata, and 44 others representing all sides of the house.

Narasimha Rao stated that according to government's information Pakistan has been trying to acquire uranium enrichment capability and also the technology to reprocess nuclear fuel which could enable it to develop atomic weapons. To build up uranium enrichment and nuclear reprocessing facilities, Pakistan is believed to have imported vital equipment from various European countries in a clandestine manner. Recent disclosure about the shipment of U.S.-made electronic equipment to Pakistan via Canada is one of the many reports appeared in the world press in the past several months about procurement of equipment by Pakistan which could be used for building up her nuclear capability.

Narasimha Rao informed the house that according to the latest information three persons have been charged before a criminal court in Canada for exporting strategic electronic equipment illegally to Pakistan. He said they are now Canadian citizens; one of them is of Indian origin and another of Pakistan.

Narasimha Rao, however, hoped that the Government of Pakistan would abide by its assurances that its nuclear program is solely directed toward peaceful purposes and has no nonpeaceful dimensions. He also hoped that Pakistan would desist from any action which would disturb the peace and stability in the subcontinent and impair the process of normalization of mutual relations.

Initiating the discussion, Shiv Chandra Jha criticized the United States for its endeavor to weaken India by strengthening its neighbors. Prime Minister Mrs Gandhi was present when the house took up the call attention notice for discussion.

CSO: 5100

BRIEFS

HEAVY WATER SELF-SUFFICIENCY--New Delhi, Dec 5: Indian Premier Indira Gandhi told Parliament yesterday that India would be fully self sufficient in the production of heavy water needed for nuclear power plants when existing and proposed heavy water plants were fully commissioned. She said that at present there were some snags in the completion of certain plants. But when all the plants functioned fully, there would be no deficit of heavy water in India. Mrs. Gandhi also said a fast breeder test reactor, now being built at Kalpakkam near Madras, would help research into the feasibility of power generation in India using fast breeder technology. The Prime Minister added that the Hyderabad nuclear fuel complex was being expanded at an estimated cost of over 130 million rupees (over 6 million dollars). At present, it can make 100 tons of finished fuel per year and this figure was being raised to 210 tons.--AFP [Text] [Karachi DAWN in English 6 Dec 80 p 9]

DISCOVERY MEETS URANIUM NEEDS--New Delhi, Dec 17 (AFP)--Adequate uranium and other raw material resources to meet requirements of the nuclear power programme currently envisaged have been discovered in India, Parliament was informed today. Junior Minister for Science and Technology C.P.N. Singh told the lower house that intensive surveys and exploration conducted by the mineral division of the Department of Atomic Energy have resulted in the identification of a number of new uranium deposits, in addition to the already known Singhbhum thrust belt in Bihar state. He also assured the house that lapses in the nuclear energy policy during the last three years have been rectified. In reply to a question, Mr Singh said a fast breeder test reactor with French collaboration was under construction at Kalpakkam, in Tamil Nadu, in the south, at an estimated cost of 587 million rupees (over \$73 million). [Text] [BK171633 Hong Kong AFP in English 1225 GMT 17 Dec 80]

CSO: 5100

COUNTRY HOPES FOR 'AMICABLE AGREEMENT' ON NUCLEAR WASTE DISPOSAL

Canberra THE FINANCIAL AUSTRALIAN in English 3 Nov 80 p 3

[Article by Des Keegan: "Japan Insists on Using Pacific as Nuclear Dump"]

[Text] The Japanese Government will press on with large scale dumping of low level nuclear waste in the Pacific Ocean, but will store the material temporarily in Japan.

The Minister of International Trade and Industry, M. R. Tanaka, said last week Japan had no other means of disposal and would continue efforts to win agreement with Pacific Islanders.

He said the nuclear waste would be held in hermetically-sealed concrete containers in Japanese power stations pending amicable agreement with the islanders.

Japan was forced to dump the material in the Pacific rather than in local coastal waters because of international commitments.

The London conference of the International Atomic Energy Agency stipulated that waste must be dumped in at least 4000m of water.

That ruled out Japanese waters and forced selection of deeper water in the Pacific Ocean.

Mr Tanaka said the waste was low grade and harmless.

Japan plans to cut its dependence on oil to 50 per cent of total energy needs within 10 years by substituting nuclear power, coal and other sources.

In 10 years, Japan hoped to have nuclear power capacity of 51 to 53 million kilowatt hours installed and could even reach 60 MKW.

Australian suppliers have been integrated into the power scheme to supply 4 per cent of the uranium--about 1000 tonnes of oxide a year.

That would be increased later in the 1990s, but Australia is very much a late-comer and would start with a small share.

Japan also planned to import 143.5 million tonnes of coal, with about 53.5 million tonnes in steaming coal, Mr Tanaka said.

Australia's share would be very significant.

Mr Tanaka said he was aware of the desire of the Australian Government to have Japan share some of the cost of infrastructure for coal loaders and so on.

Mr Tanaka met the Prime Minister, Mr Fraser, the Deputy Prime Minister, Mr Anthony, and the Minister for Industry and Commerce, Mr Lynch, last week before visiting the Pilbara and other Australian centres.

He said Japan was hopeful of concluding a nuclear agreement with Australia soon and an Australian mission would visit Japan in December.

He stressed that Japan and Australia would need to cooperate in resource development.

CSO: 5100

BRIEFS

NUCLEAR ENERGY ALTERNATIVE--Tokyo 9 Dec (KYODO)-- A government sponsored group of scientists and industrial representatives met here Tuesday and called for positive development of nuclear fusion as an alternative energy for oil. The first meeting on nuclear fusion was held at a hotel under the sponsorship of the Education Ministry at the initiative of Education Minister Tatso Tanaka. Tanaka told the meeting that it is the most important matter for Japan, poor in resources, to promote scientific technology, stressing the necessity of scientific research and development. Former Prime Minister Takeo Fukuda, who was present at the meeting, said the nation must develop an alternative energy for oil and gave his views that nuclear fusion is the most promising as a new energy. Scientists at Kyoto and Osaka universities reported their respective research on nuclear fusion. Industrial representatives demanded more involvement in the research and development of nuclear fusion. Education Minister Tanaka said that he has no plan at present to hold similar meetings on a regular basis. [Text] [Tokyo KYODO in English 1132 GMT 9 Dec 80 OW]

CSO: 5100

NEW REACTOR WILL HAVE ADEQUATE WASTE DISPOSAL FACILITIES

Kuala Lumpur NEW SUNDAY TIMES in English 9 Nov 80 pp 9, 12

KUALA LUMPUR.
[Text] **Sat.** — A large private pond — and NOT the Klang Valley's main source of drinking water — will be the dumping ground for waste from Malaysia's first nuclear reactor at Bangi.

And by the time the waste gets into the pond, it will have lost almost all its radioactive content anyway.

"We're going to rear fish in that pond and turn the place into a beauty spot," Dr Noramly Muslim, the director of Puspati (Tun Ismail Atomic Research Centre), said yesterday.

Fears that the Sungai Langat would be polluted by radioactive waste were raised last week at a conservation seminar where participants were apparently told the radioactivity level in the river would be "within acceptable limits."

Dr Noramly has been quick to allay fears that the Sungai Langat will be the reactor's dumping ground. Liquid, solid and gaseous radioactive waste from the reactor will be treated accordingly.

It is the liquid waste, kept in storage tanks first and possibly chemically treated, which will be drained into the pond within the centre's 66-acre site near the Universiti Kebangsaan. It will be discharged only when its radioactive level is below permissible levels.

Leftover sludge from the chemical treatment and solids will be stored in shielded containers at Puspati's waste treatment centre. Solid wastes include air filters, ion-exchange resins, irradiated samples, tissue paper, plastics, protective clothing and tools which have been contaminated.

Gaseous waste escapes into the air through the chimney. Dr Noramly said the two major radioactive gases — Nitrogen-16 and Argon-41 — decay or lose their radioactivity so quickly that by the time they reach the chimney they will be harmless. Any radioactive gas that does reach the air is diluted, he said.

"In the isotope production cells themselves, the main gaseous waste is iodine-131, but this will pass through a series of filters which will absorb the iodine," said Dr Noramly.

Not content with in-plant safety measures, Puspati will regularly monitor radioactive levels in its gaseous and liquid wastes as well as in a wide area surrounding the centre.

Samples of river water, drinking water, rain water, food crops, vegetation and river organism will be collected and analysed. This environmental surveillance programme is expected to begin before the reactor goes into operation in early 1982. In this way,

Puspati will have pre-reactor records of radioactivity levels.

"This programme will continue throughout the lifetime of the reactor," Dr Noramly said. "Fellow-scientists have accused me of being over-cautious. Well, I prefer it that way even though the research reactor we will be using is supposed to be one of the safest available."

The reactor is an American Triga Mark II model costing \$6 million. The Triga — Training, Research, Isotope, General Atomic — reactor is designed specially for training and research in nuclear science and technology as well as isotope production.

It uses a uranium-zirconium hydride fuel-moderator material, considered one of the safest fuel combinations for research.

In addition, any sudden big change in heat production in the reactor will heat both the fuel and moderator simultaneously, resulting in a less efficient fuel. The reactor will then promptly return to its normal operating power.

"Apart from installing radiation monitors for early warning to enable immediate remedial action, all laboratories will be kept at negative pressure," Dr Noramly said. "This means there will be no leakage of air from the laboratories."

Puspati will produce 12 types of radioisotopes for use in medicine, industry, agriculture, hydrology and research.

Radioisotopes are an essential part of the diagnostic procedure in medicine. Diagnosis can be accomplished through the use of radio-pharmaceuticals which are mainly applied to thyroid, hepatic, renal mineral metabolism, regional blood flow and cardiac studies.

In industry and research, radioisotopes are used as tracers in, for instance, mixing fluids, powders and gases.

The entire Puspati centre is expected to cost about \$22 million. The 34.76 kilos of uranium containing fuel elements for the reactor are expected to arrive next October.

In four years, Puspati should have produced about \$1 million worth of radioisotopes. In 1977, Malaysia imported about \$180,000 worth of radioisotopes.

PAKISTAN

NUCLEAR PROGRAM EXAMINED BY BULANTSEV

LD181112 Moscow TASS in English 1038 GMT 18 Dec 80

["Dangerous Ambitions"--TASS headline]

[Text] Moscow, 18 Dec, TASS--TASS commentator Sergey Bulantsev writes: Indian leaders recently have more than once expressed serious anxiety over nuclear preparations by Pakistan's military administration.

Thus, last Tuesday Premier Indira Gandhi declared that India was closely watching Pakistan's nuclear arming. Earlier, External Affairs Minister V.P. Narasimha Rao said in Parliament that the Indian Government knew of Pakistan's nuclear preparations and its intentions to manufacture atom bombs.

The Pakistani administration declared more than once that it was not going to develop atomic energy for military purposes and was not going to manufacture nuclear weapons. Numerous testimonies of the international press, however, furnish serious foundations to question the sincerity of such reassurances. Recent reports that Pakistan is getting from the West electronic equipment necessary for the development of nuclear weapons, for instance, met with a big response from the public. Earlier, in May last, the Pakistani president was reassured at talks in Beijing that China would help him to join the "nuclear club."

Three Pakistanis, travelling on diplomatic passports, were recently arrested in Montreal, the CANADIAN PRESS news agency reported a few days ago. They tried secretly to carry devices for the manufacture of atom bombs to Pakistan. Documents on nuclear technology and the manufacture of atomic weapons were seized from one of the "diplomats" at the time of his arrest; he turned out to be a representative of the Pakistani Atomic Energy Commission. Special interest of the CANADIAN PRESS was aroused by the fact that the seized equipment was U.S.-made. In this context, the PRESS voices the opinion that the principal persons involved in this sinister affair are in the United States, while Canada in this case was used as a staging post for the shipment of American equipment to Pakistan.

As for nuclear raw materials, according to the UPI agency, in the period after 1977 Pakistan has purchased 368 tons of partly dressed uranium ore directly or through third countries. Well-informed quarters believe, the Hong Kong ASIA WEEK writes in this context, that Islamabad's expenditures on the nuclear programme with the object of making their own nuclear bomb already exceeded 2,000 million dollars.

All these facts enabled the Indian press to draw the conclusion that Islamabad already has everything needed for the manufacture of 5-7 atom bombs or will have it before long.

There is hardly any need to prove that hazards for the cause of peace in Asia and throughout the world would result from the appearance of the atom bomb in the hands of the military rulers of Pakistan. Above all, this would create a serious threat to India and the other neighbours of Pakistan. The nuclear arms race, inevitable in such a case in South Asia, would set up another seat of international tension, fraught with the most dangerous consequences to the peaceful life of millions of people in the region. The entire responsibility for such developments would rest with the Pakistani administration, and also with China and those western countries that encourage Islamabad's nuclear ambitions.

CSO: 5100

CALL TO RECONSIDER CHASHMA NUCLEAR COMPLEX

Karachi MORNING NEWS in English 13 Dec 80 p 3

[Article by Shahidur Rehman]

St Paul (USA), Dec. 12: Dr I. H. Usmani, former Chairman of the Pakistan's Atomic Energy Commission, has asked President General Zia-ul-Haq to appoint a high-powered commission to reconsider all the aspects of setting up a proposed nuclear complex at Chashma on River Indus in the Mianwali district.

"In my opinion and the opinion of the most outstanding geologists appointed consultant by PAEC, Chashma barrage site for the nuclear complex is a very serious seismological risk", he said in an interview with MORNING NEWS.

Dr Usmani, currently Interregional Energy Adviser for UN, was invited by Macalester College, St Paul, to speak on the energy crisis.

He said that he has written a letter to President General Zia-ul-Haq seeking his indulgence before the perspective plan of PAEC envisaging setting up of 8 nuclear plants at Chashma, becomes irreversible.

Dr Usmani pointed out if God forbid, any accident similar to Three Miles island in USA occurs at Chashma site, it would contaminate the Indus River for 24,000 years, completely ruining life and economy in Pakistan. He said his objections to Chashma site stem from the observations of Geology Laboratory of Columbia University which was appointed consultant by the PAEC to oversee its plans.

According to Dr Usmani, the consultants have commented that the complex is being built at "Chashma seismic fault" which could be very dangerous in the event of an earthquake.

Dr Usmani was instrumental in the setting up of the research reactor at PINSTECH and KANUPP at Karachi.

He lamented that while PAEC has failed to add to the nuclear power capacity, the only nuclear plant at KANUPP was also out of work because of the unrealistic plans prepared by the PAEC.

He argued that the complex should be built on a site where it would cause minimum damage by way of contamination to human life in the event of a nuclear leakage or

accident. He gave three arguments against the decision of locating the site at Chashma.

1. In the event of a damage through accident it would inflict irreparable damage to human life.
2. It would be the prime target in the event of a war.
3. Damage would be higher at Chashma than at any other place if it is damaged through sabotage.

He was of the opinion that Pakistan's nuclear complex should be located in the south somewhere on the Makran coast while hydel energy projects should all be in the north.

Poor Planning

Dr Usmani accused Atomic Energy Commission of slogan mongering and making tall and false claims and for playing to the gallery. In his view PAEC also chalked out unrealistic plans which were misunderstood by the Western countries.

It was bad planning and decisions regarding the nuclear policy which made Pakistan's nuclear plan, a target of criticism and controversy all over the world, he maintained. [as published]

While talking about his preference to locate the complex at Makran coast, Dr Usmani said it might be argued that a coastal site would be an easy target for enemy missiles. In present day wars, distance have become meaningless as missiles could be fired with bull's eye accuracy from thousand of miles, he pointed out.

The high-powered commission (suggested by Dr Usmani in his letter to the President of Pakistan) should be headed by a judge of Supreme Court and it could even seek advice of International Atomic Agency, he said.

Energy Ministry

Dr Usmani also called upon the President of Pakistan to establish a full-fledged Energy Ministry to chalk out a comprehensive policy for energy.

Elaborating his assertion that PAEC was responsible for making Pakistan's nuclear policy controversial abroad, Dr Usmani said total plutonium produced by KANUPP was 15 tons per annum, and it was therefore natural for western countries to be suspicious of our nuclear plan when PAEC started shopping for a reprocessing plant of 100 tons capacity.

He was of the view that Pakistan would have succeeded in securing a reprocessing plant of lesser size.

Similarly, he said, the perspective plan of PAEC to add one nuclear reactor every second year during the rest of the two decades of the present century was also unrealistic. One nuclear reactor of 2,000 MW costs one billion dollars. It was this unrealism which has made our nuclear plan a laughing stock abroad, he opined.

Dr Usmani thought that Pakistan should also try to develop technology for solar energy. In this connection, the United Nations had already sanctioned 2.5 million dollars for setting up demonstration projects and solar R&D (Research and Development) laboratories in Pakistan. The amount would become available to Pakistan as soon as these projects are approved by the Pakistan Government.

Dr Usmani has been instrumental in promoting the use of photo voltaic cell for various energy uses. Although its present price was really high, he was hopeful the next few years would witness a big reduction in its price through R&D and increased consumption.

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TAIWAN

DEVELOPMENT OF NUCLEAR POWERPLANTS NOTED

OW160620 Taipei International Service in English 0100 GMT 15 Dec 80

[Text] In Taipei it is reported that the Republic of China is vigorously diversifying its energy resources with particular emphasis on building more nuclear plants. Officials said: The government plans to increase its nuclear reactors from 2 to 26 by the turn of the century. The output of these reactors will represent 40 percent of the ROC's total power consumption.

The Republic of China, almost totally without natural resources, depends heavily on oil for its energy. Officials said power generated by the existing 2 nuclear reactors is 600 megawatts each, representing only 16 percent of the ROC's power output, coal, 12 percent, and hydroelectric, 10 percent. (Bruce Pao-hai Chu), vice president of the Taiwan Power Company, said: 4 nuclear reactors with 1,000 megawatts each are now under construction and are expected to be completed in 1985. Thereafter, he said, the Republic of China will rebuild a 1,000 megawatt nuclear reactor each year until the year 2000 to reduce its dependency on oil. In an interview, (Chu) said that by then these nuclear plants will generate 50 percent of ROC's power consumption with oil only 27 percent, coal 16 percent, and hydroelectric 7 percent. He said: Nuclear powerplants have become increasingly important for the Republic of China because of the uncertain political situation in the Middle East.

CSO: 5100

NEW NUCLEAR REACTOR COMMISSIONED

AU181220 Sofia BTA in English 0840 GMT 18 Dec 80

[Text] Sofia, 18 Dec (BTA)--The third reactor of the "Kozloduy" atomic electric power station, with a capacity of 440 megawatt, was commissioned yesterday. Now the "Kozloduy" atomic electric power station, the first reactor of which was switched into the power grid in 1974, is Bulgaria's biggest electric power station. With its 1320 megawatts it outbeat the previous supremacy of the "Varna" thermo-electric power station.

The three reactors of the atomic electric power station will be producing about 30 million kwh of electric power every day-and-night. The "Kozloduy" atomic electric power station already produces 20 percent of the total electric output of Bulgaria.

Next year the fourth reaction of the station will be brought on stream too. The programme for speeded-up development of the atomic power generation, which has been approved by the government, provides for a step-by-step building of new high capacities. The first 1000-megawatt reactor of the station will be completed in the 1984-1985 period, which is under construction now. By 1987-1988 another reactor of the same kind will "add" its atomic power into the Bulgarian power system. So in 1990 almost half--about 40 percent--of the electric power of Bulgaria will be produced at atomic electric power station.

CSO: 5100

CHILE

BRIEFS

URANIUM, COPPER EXTRACTION--Mining Minister Carlos Quinones told newsmen during the inauguration ceremony of the Lo Aguirre copper field that an increase of the copper price is expected in January. Regarding uranium which reportedly will be extracted at the Las Cascadas field, he said that the radioactive mineral is reserved for the state and so far no request has been made or authorization given for its exploitation or export. [Excerpt]
[PY160156 Santiago Chile Domestic Service in Spanish 2300 GMT 15 Dec 80]

CSO: 3100

GRAEF FERNANDEZ: OUR FUTURE LIES IN NUCLEAR POWER

Mexico City EL DIA in Spanish 12 Nov 80 p 9

[Report on interview with Dr Carlos Graef Fernandez, 1970 National Science Prize-winner, manager of the fuel cycle in Mexican Uranium, a state enterprise, by Sadot Fabila Alva; date and place of interview not given]

[Text] On the eve of the publication of the National Nucleoelectric Plan, Dr Carlos Graef Fernandez stated his position to the effect that Mexico should use both lines for generating power of a nuclear origin: natural uranium with heavy water and enriched uranium, in order not to depend on one single technology.

Graef Fernandez was honored, on 10 November, by President Lopez Portillo with the "For Nuclear Merit" medal. In 1970, he was awarded the National Science Prize. He holds the degree of Doctor of Philosophy from the Massachusetts Institute of Technology. He was president of the Mexican Physics Society and of the Mexican Culture Seminar. In 1969, he was president of the United Nations Group of Experts on Nuclear Energy, and, in 1974, was emeritus professor in the College of Sciences of the UNAM [National Autonomous University of Mexico]. At present, he holds the post of manager of the fuel cycle in Mexican Uranium, a state enterprise.

When he was interviewed, he stated that we are lagging in the construction of nucleoelectric powerplants with regard to power generating capacity predicted for the immediate future based on those plants. This will necessarily result in more oil burned and in the development of coal-fired electric powerplants to handle the shortage.

He also admitted the presence of a trend against nuclear development in Mexico, which believes that we have enough oil to meet our electricity requirements and it also maintains that we lack atomic technology, which entails risks to mankind.

"I believe that these persons are wrong." When he pointed out that "it is a blessing that we have oil," he said that the only guarantee known up to now for a supply of power in the future is nuclear energy.

Known alternative sources -- wind power and solar power -- solve local, only domestic problems and, with regard to geothermal power, 2,000 megawatts can be obtained by the year 2000, according to estimates by experts. This is insufficient for demand at that time, taking into account the power that can be obtained from hydroelectric and thermoelectric powerplants.

Nevertheless, in spite of that opposing trend, he pointed out that most stimulation was given to nuclear development precisely with President Lopez Portillo, when he was director of the Federal Electricity Commission.

He stated that the Laguna Verde plant, in Veracruz, will be able to go on line by 1983 with a generating capacity of 1,300 megawatts.

Effort being made at present is being concentrated on completing the Laguna Verde plant and on exploring, prospecting and quantifying our uranium resources and on construction of a processing plant in Chihuahua to produce 150 metric tons of concentrated uranium a year. This plant may be finished before the end of 1982.

Incalculable Uranium Reserves

Proved uranium reserves have been estimated at 9,500 metric tons. He stated that a sizable amount of deposits found recently in Tlaxiaco Valley, Oaxaca, and in the phosphoric rock production area of San Juan de la Costa and Santo Domingo, in South Baja California, must be added to this.

At these last two places, San Juan de la Costa and Santo Domingo, "we have an unlimited source of uranium, on the order of 151,000 metric tons." The region has very favorable conditions for exploitation, owing to the extraction of phosphoric rock -- for fertilizers -- with which the cost of extraction is lowered considerably. Therefore, he remarked, "we are not frightened by the challenge of having 20 or more nuclear powerplants in this country."

He remarked that Mexico's entrance in the nuclear age represents an enormous possibility for technological development in the various aspects of engineering -- physics, chemistry, geology, metallurgy and, especially, the training of a rather considerable number of middle-level technicians required so much by Mexico in this stage of industrial "takeoff." Entrance in the nuclear age "is a very strong incentive to Mexican technology."

The Atomic Club and Technology

Graef Fernandez stated that we must implement a transfer of technology as soon as possible in this very complex branch of modern science. He said that it is urgently necessary to produce the fuel element -- to build a plant that will convert uranium concentrate into uranium hexafluoride -- but this requires a division of the task in time.

We cannot do more than this. Uranium enrichment is possible already for those who have atomic technology in their possession: the United States, France, Germany, the Soviet Union, Canada and associates of these countries, Sweden, England and Holland.

He said that from the time when we contracted with the United States for the purchase of reactors for Laguna Verde to the present date, possibilities of "options" for acquiring one or more nuclear plants have opened up considerably, but the most that we have been offered is to be shareholders: the ERODIF plant in southern France, or to sell us the service: the United States.

France, at least, "has opened up its facilities to us," but it is a question of an atomic plant consuming 3,600 megawatts, an amount of power greater than what is consumed by the entire Valley of Mexico. That is to say that we could not have atomic uranium enrichment facilities even if we had technology transfer capabilities, he stated.

ENERGY DEFICIT FORESEEN IN 15 YEARS WITHOUT NUCLEAR ENERGY

Montevideo EL PAIS in Spanish 12 Oct 80 p 24

[Article by S.R.: "We Must Extract Uranium From Our Sea"]

[Text] Within 10 years, Uruguay could count on nuclear energy as its most effective alternative energy source to oil. By the year 2000, even with Salto Grande and Palmar fully operative, our country's energy deficit will be of the order of 600 megawatts annually, if we consider that demand will increase at an average rate of 6 percent annually over the next 15 years. Uruguay has in its sea a resource it has not yet exploited: uranium. It is present in a practically constant concentration of 3 kilos per 1,000 cubic meters of water throughout the seas of the world. The price of 1 kilo of uranium (approximately \$100) is the same as that of 1 ton of heavy fuel oil. These were some of the statements made to EL PAIS by government adviser Engineer Mario Jorge Coppetti, a dedicated researcher on energy problems, especially nuclear power.

During an extensive dialog held in his office in the Legislative Palace, Engineer Coppetti expressed the opinion that solar energy, coal and gas are other sources that should be taken into account, although in the long run they would not yield as much energy as a 600 megawatt nuclear reactor.

Energy Outlook

"Uruguay currently has installed a capacity of 650 megawatts annually [as published]. As the number of consumers increases, the energy demand also increases. Annual growth varies. It can be around 4 percent, 5 percent or even more than 10 percent. Assuming an average growth rate of 6 percent annually, and with the hydrothermal power generating system fully operational by then, 1995 will see the start of a growing energy shortfall, which by the year 2000 will be of the order of 600 megawatts annually," the adviser said. In this regard, he explained that this amount of power is about half the total energy Salto Grande will be generating by 1995, at which time Uruguay will be receiving the maximum to which it is entitled under the binational agreement, that is, around 850 megawatts.

"For the time being, the engineer said, "we must continue depending on oil. The most our country can do is to maintain a reasonable supply of crude to cover the needs of its thermal plants. That plus putting into operation the Palmar dam. In this way, the availability of electrical energy will carry us to within another 15 years."

The Alternative: Nuclear Energy

"Uruguay must seek an alternative source to oil that it can bring into being within 10 years. That source is nuclear electric or nuclear power generation," said Engineer Coppetti, several of whose recommendations in this respect, included in a detailed report prepared in December 1978, have been incorporated in the National Atomic Energy Plan drawn up by our government last year.

"I speak of 10 years," he said, "because that is what it takes to train personnel, establish contacts with the international bodies that concern themselves with this field, and carry out the necessary technical and economic feasibility studies."

Asked about the dangers that could be involved in a malfunction of the proposed nuclear plant to be installed in our country, Engineer Coppetti borrowed from the words of J.O. Tattersall, general manager of the Atomic Energy Council's License Service of South Africa, who said: "By the very nature of the materials used in the building of reactors, a nuclear explosion is physically impossible. Such an event could never occur. The dangers to the public deriving from nuclear plants are probably at least 5,000 times less than those inherent in the use of automobiles, 50 times less than those attributable to lightning, and considerably less than those involved in exposure to solar radiations and those of the earth, to which we are all exposed."

Uranium in the Sea

"If in the near future Uruguay were to adopt a nuclear electric policy based on nuclear fission, the necessary fuel will be uranium, which has a tremendous energy potential," said the government adviser.

In this regard, he made an interesting revelation. "Uruguay has still not made use of its sea riches. It has already recognized one of them: fishing. But it still has not started exploiting another of them: uranium," he said.

"The concentration of uranium is practically constant in all seas of the world: 3 kilos per 1,000 cubic meters of water. Moreover, it is estimated that the total quantity of the mineral contained in sea water--some 2 million tons throughout the world--is 1,000 times greater than the total that exists in the earth's crust," he added.

Japan and England are already extracting uranium from the sea, he told us. He added some other interesting facts: One kilo of uranium, slightly enriched, produces the same energy as 40 tons of heavy fuel oil. The UTE [General Administration of State Electric Power and Telephones], to produce electricity, consumes 350 tons of fuel oil a year, which is the equivalent of 10 kilos of uranium.

In view of this, we asked, of course, what is the cost relationship. And here we were again surprised. "Fuel oil," said Coppetti, "costs \$100 a ton and the cost of a kilo of uranium is also approximately \$100."

But the sea contains another fuel as well, which will be exploitable shortly after the year 2000, once the technology of the fusion process will have been sufficiently mastered. That process uses deuterium (heavy hydrogen), of which the sea is a practically inexhaustible source. In this regard, the legislator told us that the fusion reaction has a duration of only some milliseconds and that the technology of the process has not yet been mastered sufficiently to exploit it.

Cooperation With Argentina

"A nuclear power reactor, that is, one of 600-megawatt capacity, which is the minimum it can have to be considered as such, and which is what our country would need, costs currently \$2,000 [as published]. Uruguay is not in a position to undertake an investment of this magnitude. The alternative would be a binational undertaking with Argentina, a neighboring country that is well advanced in this field and which moreover has offered us its aid," said Engineer Coppetti.

"Argentina started working on nuclear electric energy 25 years ago and today has three plants (Atucha 1, Atucha 2, and Embalse Rio Tercero), one of which is now fully connected, and four others in the planning stage with the aid of the Federal Republic of Germany. To its experience must also be added the fact that it is a neighboring country and that transmission losses would be minor in the event of installation of a binational plant," he said.

As regards Brazil, our other neighbor, he recalled that it has two nuclear projects already in an advanced stage in Angra dos Reis, in the northern part of the country, and six others contracted for, also with the Federal Republic of Germany.

"In Uruguay," he said, "we have the Nuclear Research Center with a 1-kilowatt reactor having applications in medical and agricultural research, and it is planned to install a 1-megawatt reactor (1,000 times more capacity)."

Other Sources

With regard to solar energy, Engineer Coppetti thinks that, considering our geographical situation and our climate, it will not be exploitable other than for household use.

As for coal, he said it could be a solution, although Uruguay does not have its own deposits.

We spoke also of gas, a source that is about to be used by way of our agreement with Argentina for the installation of the gas pipeline.

Nevertheless, for our interlocutor, the real solution is one alone: nuclear energy.

"In any case," government adviser Engineer Coppetti concluded, "free ourselves of dependence on oil, world reserves of which will be exhausted in approximately 3 decades. And we must weigh the advisability of two alternatives: whether to administer them primarily as a source of fuel or of raw material for the petrochemical industry."

INTERMINISTERIAL COMMITTEE SET UP TO DEFINE NUCLEAR ENERGY POLICY

Algiers EL MOUDJAHID in French 1 Nov 80 p 5

[Report by Ach. C.]

[Text] The Interministerial Committee on Nuclear Energy and Other Alternative Forms of Energy was installed Wednesday afternoon by Abdelhak Berarhi, member of the Central Committee and minister of higher education and scientific research, in the course of a meeting held at the CSTN [Center for Research on Nuclear Technologies].

In his introductory speech the minister, before defining the precise mission of this committee, found it necessary to place it in the general context in which the complex question of nuclear energy must fit. He first recalled that the Central Committee, during its second session, put the energy problem in terms of "preservation of our resources" over the long term. This indispensable preservation of our resources is still subordinate to our development.

The government, he added, has decided upon the creation of this committee, but that decision must be understood in its overall context. It thus cannot be dissociated from the work being done by the party's economic commission. The general orientation of an energy policy draws its inspiration both from the national constitution and from the political decisions emanating from the party.

Still within the framework of this reflection, the minister added, the question of nuclear energy is rather complex. A policy on the matter of nuclear energy has necessarily to take account of a number of parameters, including the national sovereignty and national defense, the link with our development, geopolitics, and the safety and protection of the population. In installing a nuclear power plant, he said, it is necessary to take several criteria into consideration. The national constitution will give us the broad orientation for working out an integrated method and long-term planning. The minister, by way of illustration, cited a certain number of questions relating to the development of nuclear research in this country.

The interministerial committee's mission will consist essentially in doing a basic study, in working out "a sort of memorandum" on the question of nuclear energy and alternative forms of energy. Aside from the fact that its tasks will include evaluating our uranium resources and other nuclear resources, it is entrusted with evolving a certain number of proposals: the technical choices, the training

systems, and the production centers. It must also work out a nuclear foreign policy that takes account of our basic choices.

From a methodological point of view, sectoral groups have been constituted. These groups are seven in number. They have the following assignments:

- 1) Conservation of energy;
- 2) Nuclear raw materials;
- 3) Nuclear technology, research, and development;
- 4) Human resources and planning;
- 5) Broad outlines of international policy;
- 6) Radiation protection and regulation; and
- 7) Lastly, questions of technology, research, and development on solar energy, wind power, and geothermal power.

At the same time, at the organizational level, it has been decided to install a permanent secretariat of the committee, which would be entrusted essentially with maintaining the documentation concerning the field in question. The seven groups that have been set up will begin work this week. They will have a coordination meeting on 8 November.

Let us note, lastly, that this first meeting, which will include representatives of several ministries, will be steadily enlarged as the work of the seven separate groups advances.

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CSO: 5100

DEN UYL WANTS DEBATE ON NUCLEAR WASTE REPROCESSING POSTPONED

Rotterdam NRC HANDELSBLAD in Dutch 5 Nov 80 p 13

[Text] The Second Chamber's plenary debate on the approval of reprocessing contracts for Dutch nuclear waste with France and England will probably not be held this week. Yesterday opposition leader Den Uyl entered a motion for deferment.

Den Uyl does not agree that a number of Chamber members were only allowed to see the contracts after a written promise to the French company Cogema not to reveal any details.

Members of the Chamber cannot and may not extend such guarantees to private businesses. Den Uyl said yesterday in a short rules debate that only the government can be held responsible for data revealed by it or at its request.

According to the opposition leader Minister Van Aardenne is "fundamentally on the wrong track when it relegates responsibility to private entrepreneurs."

The French reprocessing company Cogema, which is to reprocess used fission rods of the nuclear power plant in Borssele, was only after sustained pressure prepared to let the members of the permanent Chamber committee for nuclear energy see the reprocessing contracts under oath of secrecy. The Chamber members were to promise in writing that they would neither copy or reveal any details. Moreover, they would only be allowed to see the documents under supervision of a civil servant of the Second Chamber.

Den Uyl called Minister Van Aardenne's proposal to let members of the Chamber enter in writing into obligations to third parties a dangerous precedent.

In his motion the opposition leader invites the government as yet to acquaint the Chamber in the usual manner with the contents of the reprocessing contracts which the government has at its disposal; he leaves it to the government whether that will be confidential or not.

Tomorrow Minister Van Aardenne will have to express his thoughts on the motion, but it is unlikely that the debate on international agreements resulting from reprocessing contracts can still continue this week.

NETHERLANDS

CDA, VVD DO NOT OPPOSE NUCLEAR WASTE PROCESSING

Rotterdam NRC HANDELSBLAD in Dutch 7 Nov 80 p 9

[Text] The government factions of the CDA [Christian Democratic Appeal] and VVD [Union of Freedom and Democracy], therefore a majority in the Second Chamber, are not against the nuclear waste processing contracts of the nuclear power plants of Borssele and Dodewaard. The contents of these contracts are a secret to outsiders; they regulate the return to The Netherlands by the reprocessing factories in France and England of radioactive waste of reprocessed fission rods from Borssele and Dodewaard.

The VVD and the CDA made these return shipments possible by concurring with the international agreements with France and England. The agreements assure these nations that The Netherlands will accept the nuclear waste of reprocessing.

Because the contents of the contracts were kept secret the Chamber debate on their contents was rather foggy. During a preliminary debate on procedures the factions of the government parties voted against attempts of the opposition to suspend the discussions because of the element of secrecy.

Nevertheless, the CDA and VVD insisted that Minister Van Aardenne (economic affairs) take steps to make the contracts public as yet (without conditions). The opposition has strong objections to the reprocessing contracts. D'66 [Democrats 1966] and the PPR [Political Party of Radicals] repudiated the contracts in the first round of the debate. The PvdA [Labor Party] faction appeared to be very hesitant but wants to defer its definite judgment until it has heard from the minister.

Except for fundamental objections against secrecy the opposition also objects to the fact that, by accepting the reprocessing contracts, the Chamber is forced to opt for the continuation of nuclear energy for a long time to come.

D'66 spokeswoman Mrs Lambers reproached the government for engaging into an "unacceptably heavy mortgage" on future policies. Zijlstra as spokesman of the PvdA objects to the fact that the contracts will have effects which go beyond the social discussions on nuclear energy.

According to Mrs Lambers proponents of reprocessing pursue an "ostrich policy" for the waste problems of the future. Zijlstra believes that the waste problem

is badly underestimated. The unacceptability of the waste problem was for PPR spokesman Jansen a reason to introduce a motion to close the Borssele and Dodewaard plants.

Spokesman for the CDA and VVD appeared to support the contracts because without parliamentary approval the reprocessing contracts would have to be canceled and this would ultimately force the government to close the nuclear power plants of Borssele and Dodewaard. Both the CDA and the VVD want to keep the existing plants in operation, even if it would be only temporary.

CDA spokesman Van Houwelingen denied that concurrence with the agreements would, as far as his faction is concerned, also mean what he terms "actual reprocessing." He asked the government to impose conditions as regards the use of plutonium which will be generated during reprocessing.

VVD spokesman Braams emphasized that if reprocessing of the used reactor rods of the power plants is rejected there will be no solution for storage near the plants. According to him it would be indefensible to refuse the reprocessing of nuclear waste if it is responsibly packed.

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CSO: 5100

NETHERLANDS

NUCLEAR WASTE STORAGE FACILITY MAY BE BUILT IN BORSSELE

Rotterdam NRC HANDELSBLAD in Dutch 5 Nov 80 p 13

[Text] Yesterday the municipal council of Borssele in Zeeland gave the green light to the construction of a storage building for low and median radio-active waste near the Borssele nuclear power plant. The council agreed to a change in the plans it had for the area on which the nuclear plant is located. Only the PvdA [Labor Party] and PPR [Political Party of Radicals] factions voted against the plan.

The municipal council emphatically demanded that the storage building be exclusively used for waste from the nuclear power plant itself.

The council adopted a PvdA motion which objects to the construction of a second nuclear power plant in Borssele. In part III of the Memorandum on Energy Policies the government mentioned Borssele as future location. The council adopted also a CDA motion which urges that (broad) social energy discussions be started as soon as possible. Borssele finds it unacceptable that the opening of this discussion was recently deferred again to the beginning of next year.

Mayor G. van den Jeuvel announced that Borssele will open the discussion itself if the government does not take a decision very soon.

10319

CSO: 5100

SWEDEN

BRIEFS

FORSMARK 1 TO START--Forsmark 1, Sweden's 7th nuclear reactor, is to begin commercial operation before Christmas. The reactor will produce 5 TWh (billion kilowatt hours) of electricity a year, and will therefore be the largest reactor so far to start operation. Bringing of Forsmark 1 on line has gone better than planned, according to the Electric Power Authority [Vattenfalls]. The commercial operation is therefore starting a few weeks earlier than planned. Electricity production from Forsmark 1 corresponds to the electricity consumption of about 150,000 electrically warmed houses. Forsmark 2 is estimated to be in commercial operation in August 1981. Altogether both of the Forsmark units will produce about 11 TWh every year. Sweden's total electricity consumption is about 95 TWh a year. [Text] [Stockholm DAGENS NYHETER in Swedish 11 Dec 80 p 41]

CSO: 5100

END

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